

Explore PLANTS

Most of the plants that you see at Cabrillo National Monument are native and grow here naturally. These plants have adapted to the dry climate by absorbing fog that rolls in from the ocean. Climate change can threaten the coastal sage scrub community by decreasing rain and fog along the coast. Increasing the earth's temperature can cause some plants to go away and non-native plants to take over.

Match each of these plants to its name and cross out those that are non-native to Cabrillo National Monument.





Toyon

Bermuda Buttercup

Australian Bottlebrush

California Sagebrush

Coastal Prickly Pear

Shaws Agave

Explore KELP FOREST

FIND:

Herbivore

Scavenger

Carnivore

Otter

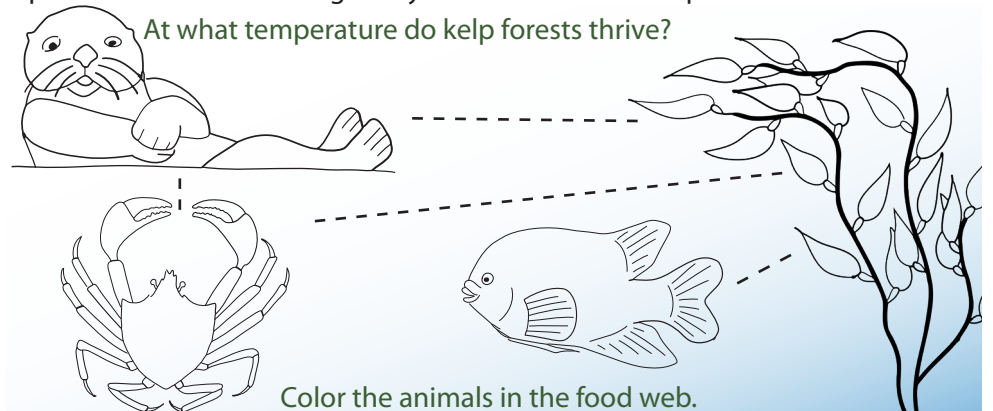
Kelp

Sun

B R S Z N G L I C K A D R G B
S K E E X R S D A X K Q C W D Z B
X P T T B G F R R D Y Y Y G Z U H Z A
F T M T O P N N E R O V I B R E H T O
Y D H O L L I E N J Q S E J A P T D E
H R F E Y V P P V M Y G T O J Q D A H
J O K I O O Q P S A H B Q W J P A O U
M Y R M D S U N X C E M J Z X O T
E P D D B V D D J S E P O Y G

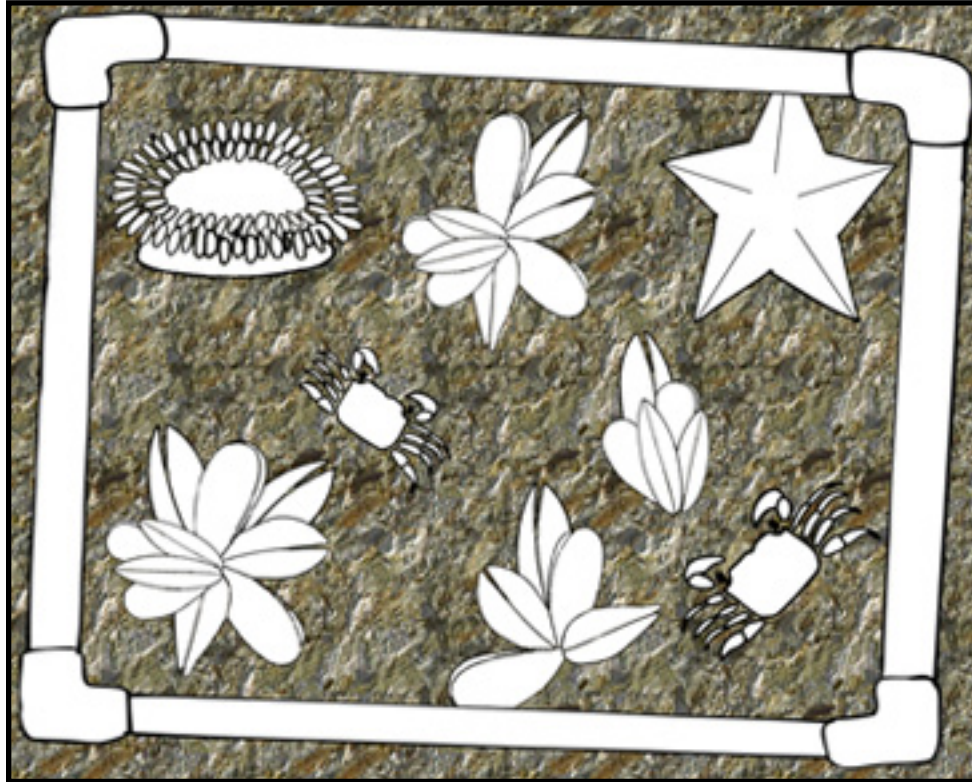
The kelp forest supports a web of life that reaches from the tidepools to the deep ocean. The tall kelp shelters the tidepools from waves, which protect young fish, spiny lobsters, and other crustaceans. The kelp makes its food from the sun and kelp crabs eat kelp. Sea otters eat kelp crabs and their waste decomposes as nutrients for plants. Global warming may cause ocean temperatures to increase.

At what temperature do kelp forests thrive?



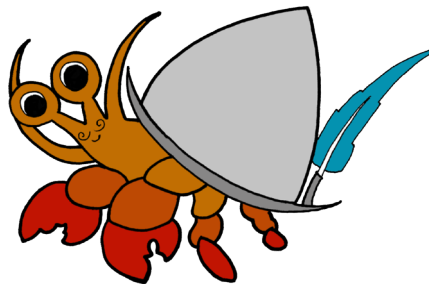
Color the animals in the food web.

Explore TIDEPOOLS



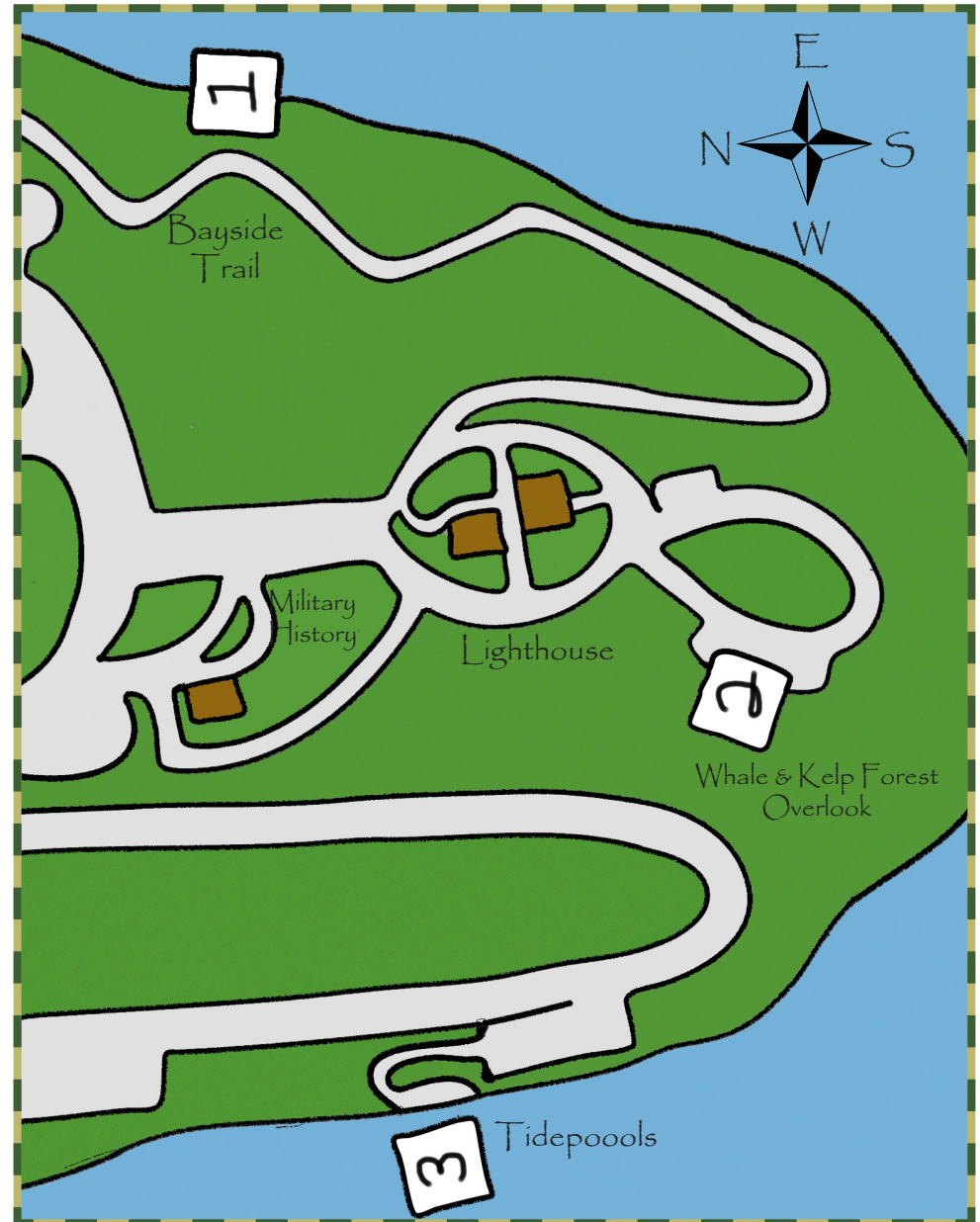
Explore the tidepools above and color in which stationary tidepool creatures in the quadrant whose habitat will shift due to sea level rise.

Climate change can lead to an increase in violent winter storms along the coast and a warmer ocean. A warmer ocean causes glaciers to melt and the ocean to expand. At Cabrillo National Monument, this raises the normal sea level in the tidepool area. This change will effect the small habitats that Crabrillo and other tidepool creatures have in which to survive. Some tidepool creatures, such as barnacles, live in one spot their whole lives and won't be able to live where they are if the sea level rises.



2. Complete the activities on the following pages. Instructions for each activity will be printed in green font on each page.

3. Bring your completed booklet back to the ranger in the Visitor Center to become a Climate Change Junior Ranger.



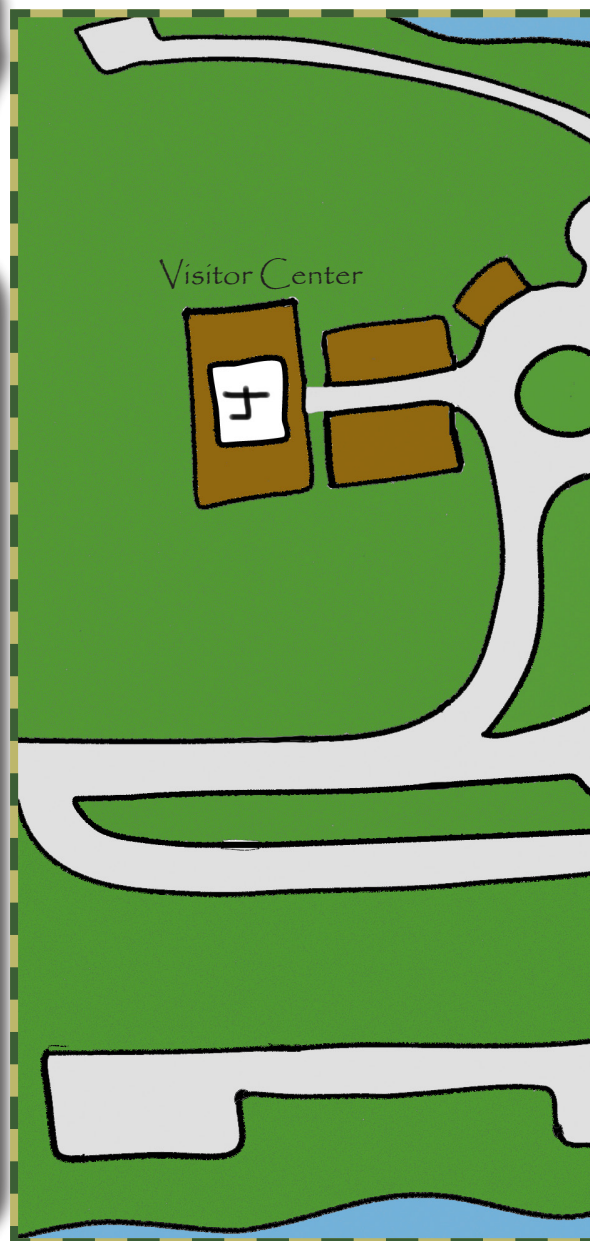
Learn

What element
is found in all
living things on
Earth?

The answer is Carbon!
We find carbon in the atmosphere, the ocean, and plants. The earth can naturally balance the amount of carbon in each of these places. When we burn fossil fuel in our cars, at home cooking or in factories, it releases unnatural amounts of carbon dioxide (CO₂) into the atmosphere, increasing the earth's temperature and changing the climate. These changes can lead to thirsty plants, warm oceans and a rise in sea level. We all have a role to play in helping the environment and there are simple things we can do every day to combat the threat of climate change!

Directions

1. Use the map to explore different areas of the park. Walk the Bayside Trail, visit the tidepools, and attend a ranger program or film in the Park Auditorium.



Protect **DO YOUR PART**

Back in 1542, Cabrillo explored everywhere with his ship. Today, you and your family travel to places with a car. These cars run on gasoline, which produce CO₂. This gas and other greenhouse gases burn fuel and pollute the air, contributing to global warming.

Rangers at Cabrillo National Monument do their part by riding bikes to work, using electric vehicles to get around the park, and recycling office and lunchroom waste!

Do your part by numbering the following actions that help combat climate change from which would be easiest (1) and most difficult (8) for you to do:

Recycling _____
Riding your bike to school _____
Using a canteen _____
Composting _____
Turn off water while brushing teeth _____
Carpool _____
Plant a tree _____
Hang clothes to dry _____

Did you know?

The more trash we make, the more a greenhouse gas called methane (CH₄) is produced in our landfills. Methane is 21 times stronger in the earth's atmosphere than carbon dioxide. At Cabrillo National Monument we have become a "Trash Free Park".

Ask a Ranger: What makes a "Trash Free Park" awesome?



Cabrillo National Monument
1800 Cabrillo Memorial Drive
San Diego, CA 92106
www.nps.gov/cabr

Congratulations!

You are now a Climate Change Junior Ranger



Now what?

Become a Webranger to learn about how climate change will effect your family, neighborhood, and national parks!

Log online to play these fun games at:

www.webrangers.us/activities/climate

If protecting our environment is important to you, then we ask you to join us!

Learn more about

Cabrillo National Monument Foundation at:

www.cnmf.org



Illustrations by Amanda Gossard



CLIMATE CHANGE Junior RANGER



Learn · Explore · Protect